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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,844	03/19/2001	Louis Peter Huber	P04870US0	9248
22885	7590	04/12/2005	EXAMINER	
MCKEE, VOORHEES & SEASE, P.L.C. 801 GRAND AVENUE SUITE 3200 DES MOINES, IA 50309-2721			EASTHOM, KARL D	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/811,844	Applicant(s) HUBER ET AL.	
	Examiner Karl D. Easthom	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3.9-12. 16-18.20.22-25,30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3.9-12. 16-18.20.22-25,30 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6283301 in view of Chiang 99/53505. JP '301 discloses, except the nickel barrier, frit encapsulant, and inert encapsulant, the claimed invention at Fig. 6c with first and second film resistors implied at par. 1 as two devices stacked in general, where one is explicitly described at par. 8, with end caps 11b and 11c, and an encapsulant therebetween. JP' 301 suggests elements 31,32,33 can all be film resistors of the same type, where different types of chips that are the same size are stacked together to save space, and since two or more chip elements in general are disclosed as stacked. Further, applicant admits at pages 1-2 that the resistors of the same type have been stacked as is known to increase capacity. Finally, the chips of Chiang are stacked as noted at the abstract, and the resistors can be the same or different. Chiang discloses that any insulator and that any metal barriers are useful for aids in stacking chip, at page 11, lines 29-36, and page 10, lines 18-25, so that an inert encapsulant would have been obvious, such as glass for example (inert as noted by applicant in his specification), while nickel plating is disclosed as a useful conductor for the chips at page 6, so that it would have been obvious to use the well known nickel since any metal is suggested and nickel is listed as a conductive metal. The Examiner takes Official Notice that glass is a well known electrical insulator, see The Random House College Dictionary (revised 1980), as proof therefor, defining insulator as "a material of low conductivity, as glass or porcelain.", so that it would have been

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obvious to employ a glass where a frit glass is simply a type of glass. Or glass is a glass frit, where frit is the fused materials used in glass making according to Websters II New Riverside University Dictionary. See also Holmes which uses glass frit, glaze and glass interchangeably, using a lead borosilicate glass at page 139 as the glass frit. The adhesives noted on page 2 of the machine translation are noted as "desirable" hence, it is contemplated that they will not be used. Also, Chiang discloses as noted on page 10 that the insulating member need not be an adhesive so that it would have been obvious not to employ one where bonding is obtained by other means. For further motivation, multiple chips are contemplated page 12 of Chiang or Fig. 6 of JP'301 rendering same obvious for the purpose of saving space or lowering resistance as suggested by Chiang at page 1, lines 30-35. The nickel barriers provide the stability and resistance to heating, because they are made of the same material as claimed, as modified, and further the elements are terms of degree. Similar remarks apply to the resistor being flow solderable since the same materials must have the same functions.

3. Claims 2-3, 9-12, 16-18, 20, 22, 24-25, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6283301 in view of Chiang 99/53505, further in view of Hashimoto. The invention is disclosed as noted except the material of the resistor being ruthenium, and the end caps of nickel surrounding the end caps. Hashimoto discloses resistor chips such as that of JP '301 of a known resistive layer material of ruthenium with end covered by nickel barriers 9a known for the purpose of having good solderability or for protecting the underlying noble metal so that it would have been obvious to plate the end caps of JP '301 where solder plating is disclosed at par. 9. Further, applicant admits at pages 1-2 that the resistors of the same type have been stacked as is known to increase capacity. As to claim 1, Hashimoto also discloses

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the chip covered in glass 7 so that it would have added more motivation to that above to employ glass with the well known resistor. For further motivation and for claims 16-17 and 24-25, multiple chips are contemplated page 12 of Chiang or Fig. 6 of JP'301 rendering same obvious for the purpose of saving space or lowering resistance as suggested by Chiang at page 1, lines 30-35. For claims 10-11, since any metal can be used for the barrier, an alloy would have been obvious since alloys are known conductors. For claim 22, par. 8 of JP /301 discloses silver as the end cap

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6283301 in view of Chiang 99/53505 and Hashimoto, further in view of Nakamura et al. The invention is disclosed as noted above except the silver palladium. That composition is a known electrode for ruthenium resistors as disclosed by Nakamura, such that it would have been obvious to employ it for the electrodes of JP '301 as modified.

5. Applicant's arguments filed 2/25/05 have been fully considered but they are persuasive. Applicant argues that JP '103 does not disclose a power resistor, but this is not correct because it handles power as do all resistors. Next applicant argues that the nickel barriers do not provide the stability and resistance to heating, but this is not correct because they are made of the same material, when modified, and further the elements are terms of degree. Similar remarks apply to the resistor being flow solderable, since the same materials must have the same functions. Applicant argues that JP'301 discloses solder used for an aid in joining so as to preclude mechanical bonding, this is not correct because the solder is a type of plating and is not an adhesive, where applicant also claims a plating as the mechanical bonding. Also, claim 1 of JP'301 discloses or claims no solder, as opposed to claim 2, so that lack of solder is disclosed.

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The argument that the insulating member of Chiang is only employed to insulate electrodes and used for a different purpose is not correct, since the devices are separated by insulating member 53. The argument that the art does not disclose the insulating member separating the devices as nonadhesive is not correct, since 53 performs that function. Moreover, the resistor devices of JP'301 are resistors on insulating layers that have insulators thereon to protect the resistor, which is suggested since all the chips are disclosed as the same size so that a further layer would be necessary. Such a top insulating layer would then also separate the device. As to Chiang not disclosing the chips as independent when not stacked, though this is not germane to the claim, this is not correct as Fig. 6 discloses two separate chip resistors. That Chiang uses the metals for the interfacial connections is not material where any metal is used to join the two chips together, similar to the metal of JP'103.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (571) 272-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom
Primary Examiner
Art Unit 2832